

Abstract

Method and circuit for controlling the peak power of a filtered signal in a single carrier data transmission system

Disclosed is a method for controlling the peak power of a filtered signal in a single carrier data transmission system. The method comprises the steps of receiving a digital sequence (13) from a data source; generating a new digital sequence ($a(k)$); shaping filtering (34) the new digital sequence ($a(k)$) and producing a filtered digital sequence ($y(k)$) Characterized in that the step of generating a new digital sequence ($a(k)$) comprises the steps of: encoding data by an algebraic error correcting code (28); and performing a bit modification (30) by deliberately adding errors in such a way that the peak power of the filter signal affected by the deliberately introduced errors is lower than the peak power of the signal unaffected by errors. Disclosed is also a circuit for performing the method.